

WHAT IS CLAIMED IS:

1. An aqueous adhesive composition having pre-bake resistance, said adhesive absent an organic crosslinker, and comprising:
water,
a self-dispersible phenolic novolak having a F/P ratio of less than 1,
an acid acceptor, and
chlorinated natural rubber latex.
2. An aqueous adhesive composition according to Claim 1, wherein the adhesive comprises, on the basis of 100% by weight:
water 60 to 70 %,
phenolic novolak resin, 5 to 15% solids,
acid acceptor 2 to 10% solids, and
chlorinated natural latex 5 to 15 % solids.
3. An aqueous adhesive composition of claim 1 further comprising silica and carbon black.
4. An aqueous adhesive composition according to Claim 3, wherein said silica has an average particle size of from about 0.010 to about 0.030 microns and a surface area of from about 130 to about 170 square meters per gram, and wherein said chlorinated natural rubber contains from about 60% to about 75% by weight of chlorine based upon the total weight of said chlorinated natural rubber.
5. An aqueous adhesive composition according to Claim 1, wherein said acid acceptor is selected from the group consisting of zinc oxide, zinc phosphate, calcium carbonate, lead salt, or combinations thereof.
6. An aqueous adhesive composition according to claim 1 wherein said chlorinated natural rubber contains from 50 to 75 wt. % chlorine.
7. An aqueous adhesive composition according to Claim 1, wherein said phenolic novolak resin is a condensation product of a monohydroxy and/or

dihydroxy phenolic compound, a trihydroxy phenolic compound and formaldehyde, having an F/P ratio of from 0.5 – 0.8.

8. An aqueous adhesive composition according to Claim 1, wherein said phenolic novolak resin comprises a co-solvent, and the condensation product of a monohydroxy and dihydroxy phenolic compounds and formaldehyde, said resin has a F/P ratio of from 0.5 – 0.8.

9. An aqueous adhesive composition according to Claim 1, wherein said composition exhibits at least 80% rubber cohesive failure to a metal substrate after exposure to a pre-bake condition of 300°F or higher for at least 3 minutes.

10. An aqueous adhesive composition according to Claim 9, wherein said cohesive failure occurs after a pre-bake condition of 300°F or higher for at least 6 minutes.

11. An aqueous adhesive composition according to Claim 10, wherein said cohesive failure occurs after a pre-bake condition of at least 300°F for 9 minutes.

12. An aqueous adhesive composition according to claim 1 wherein said phenolic resin self-disperses in water, co-solvent, and base, wherein said phenolic novolak has a molecular weight of from 500 to 3000.

13. A rubber metal composite bonded by the adhesive composition of claim 1.

14. An elastomer-metal seal comprising a cured rubber portion bonded to a an adhesive coated metal portion and an single layer of adhesive therebetween, said adhesive is absent an organic crosslinker, and comprises prior to drying, water, a phenolic novolak resin having a F/P ratio of less than 1, an acid acceptor and chlorinated natural rubber.